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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590

08/26/2003

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EXAMINER

BAKER, MAURIE GARCIA

ART UNIT

PAPER NUMBER

1639

DATE MAILED: 08/26/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

File

Office Action Summary

Application No.
09/652,962

Applicant(s)
Chang et al

Examiner
Maurie G. Baker, Ph.D.

Art Unit
1639



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 4, 2003
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above, claim(s) 5, 6, and 9-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 21 6) ☐ Other: _____

DETAILED ACTION

1. The Response filed on June 4, 2003 (Paper No. 20) is acknowledged. Claim 1 was amended and no claims were cancelled or added in this response. Therefore, claims 1-21 are pending.

2. This application contains claims 9-21 drawn to inventions nonelected with traverse in Paper No. 8. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

3. Also, claims 5 and 6 remain withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to non-elected *species*, there being no allowable generic or linking claim.

4. Claims 1-4, 7 and 8 are examined on the merits in this action.

Information Disclosure Statement

5. The supplemental information disclosure statement filed June 4, 2003 has been considered. The examiner thanks applicant for providing the translations (English Abstracts) therein for the previously unconsidered Japanese patents. The signed PTO-1449 is attached to this action.

Status of Rejections

6. The Declaration filed on June 4, 2003 under 37 CFR 1.131 is sufficient to overcome the Klaerner reference. Therefore, the rejection under 35 U.S.C. 102(e) over Klaerner et al is withdrawn. However, the rejection over Huang et al is maintained; the examiner's response to applicant's arguments is set forth following the rejection. Note the rejection has been slightly reworded as necessitated by applicant's amendments.

***Maintained Rejections
Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al (Anal. Chem. 1997; on PTO-1449).

It is noted that instant claim 1 recites "for use in solid-phase synthesis of macromolecules". This is deemed to be an intended use recitation and has not been given any patentable weight. Note that the "preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone." *In re Hirao*, 535 F.2d 67, 190

USPQ 15 (CCPA 1976). In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); *In re Otto*, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963).

Additionally, claim 1 as amended recites “a substrate *for solid-phase synthesis of macromolecules*” (emphasis added) in step (a). This is also an intended use recitation and also has not been accorded any patentable weight. As stated above, the recitation must result in a manipulative difference as compared to the prior art. The recitation “for solid-phase synthesis of macromolecules” does not provide any manipulative difference to the substrate and especially does not provide any manipulative difference to the claimed method of making.

The reference described below reads on all of the claimed limitations except for the intended use and thus is deemed to anticipate the instant claims.

Huang et al disclose a method of surface-initiated radical polymerization on silica that reads on the claimed method (see Abstract and Scheme 2). Specifically, the reference discloses “preparing polymeric thin films” where “living radicals are used to greatly improve the control of the reaction” (page 4577, 2nd column, bottom). The thin film of the reference reads on the claimed “polymeric brush”. As shown in Scheme 2, benzyl chloride free radical initiators are covalently attached to a silica surface (also see description of reaction in Scheme 1). This reads directly on the claimed “radical generation site distal to the substrate” and also on the limitations of instant claim 3. Vinyl-containing

monomers are reacted with the benzyl chloride free radical initiators on the surface via a living radical polymerization (see page 4578, 1st column and Schemes 1 & 2); this reads directly on the limitations of instant claims 2 and 4. Also as shown in Scheme 2, the polymer thin film product formed by the method of Huang et al contains amino groups, reading on the instant claim 7.

Response to Arguments

9. Applicant's arguments filed June 4, 2003 have been fully considered but are not found persuasive. The examiner's rationale is set forth below.
10. Applicant argues that the recitation added to claim 1 distinguishes the claim from the prior art. The examiner respectfully disagrees. As stated in the reworded rejection (necessitated by the amendment), the recitation added to amended claim 1 is directed to an intended use and is not accorded any patentable weight. The recitation "for solid-phase synthesis of macromolecules" does not provide any manipulative difference to the substrate and especially does not provide any manipulative difference to the claimed method of making. Huang et al discloses all of the process steps as set forth in the instant claims. Thus the reference is deemed to anticipate the instant claims.
11. Moreover, it is noted that Huang et al discloses benzyl chloride free radical initiators that are covalently attached to a silica surface. Thus the silica of the reference reads on the claimed substrate. This substrate is clearly capable of performing the

intended use of "solid-phase synthesis of macromolecules". Note that if a prior art structure is capable of performing the intended use, then it meets the claim.

12. For these reasons, the rejection under 35 U.S.C. 102(b) is maintained.

Status of Claims/Conclusion

13. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no

event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maurie Garcia Baker, Ph.D. whose telephone number is (703) 308-0065. The examiner is on an increased flextime schedule but can normally be reached on Monday-Thursday and alternate Fridays from 9:30 to 7:00.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Wang, can be reached at (703) 306-3217. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Maurie Garcia Baker, Ph.D.
August 22, 2003



MAURIE GARCIA BAKER PH.D.
PRIMARY EXAMINER